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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/598,155

09/21/2006

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EXAMINER

MICHALSKI, SEAN M

ART UNIT

PAPER NUMBER

3724

MAIL DATE

DELIVERY MODE

02/25/2010

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/598,155	Applicant(s) SORENSEN ET AL.	
	Examiner SEAN M. MICHALSKI	Art Unit 3724	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 December 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 35,38,40-44,48-54,56,59,61,63-65 and 69-92 is/are pending in the application.
- 4a) Of the above claim(s) 40,48,61,69,73-77 and 79-83 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 35,38,41-44,49-54,56,59,63-65,70-72,78 and 84-92 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 12/02/2009 has been entered.

In General

The previous office action contained two separate but related rejections, which were to be considered in the alternative in determining whether they may be maintained in light of the conversation of the interview on record, and the amendments to the claims as submitted..

The question of the patentability turns on the method or specific implementation of computing used to determine a boundary between contacting meat portions.

Either **A.) the computing is trivial**, in which case the claims are considered to be enabled and also obvious or **B.) the computing is non-trivial** in which case the claims are not enabled, despite likely being non-obvious.

With respect to the above, after consideration of the prior art, there is no tenable argument that boundary detection is trivial, and further, the balance of evidence supports a showing that boundary detection is outside the level of ordinary skill in the

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art. Mulet-Parad (US 7,519,206) discloses a boundary detection method involves “decomposition of parts...in the spatial or spatio temporal frequency domain”; Chen (US 6,279,022) discloses using “the inverse Fourier transform” and Utecht (US 6,865,800) uses a simple “sensor” to detect sheets breaking the plane of the sensor--which is not disclosed as capable of detecting boundaries between contacting components. It is clear that boundary detection is both art specific and complicated. The application does not describe the necessary information to compute the *determination of a boundary*--merely disclosing that the difference of two sets is used is not enough to enable one of ordinary skill to use the method. Examiner Concludes that the computing is not trivial, and Scenario A does not apply.

There is no simple straightforward way to detect boundaries of contacting elements, which supports the position that a person of ordinary skill would be unable to make and use the method of the present case without undue experimentation to figure out how to compute the boundary based on nothing more than scanned positional data, which is commonly available in scanning meat systems such as that disclosed by Whitehouse.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 35, 38, 41, 42, 43, 44, 49-54, 56, 59, 63-65, 70-72, 78, and 84-92 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement

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requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. The specification and figures do not enable one of ordinary skill in the art to make a device which can detect the boundary of items which are contacting and fed together into the scanning/measuring means. Applicant has set forth that the definition of abut should include items which contact—though this definition is not accepted as the broadest reasonable interpretation, if during subsequent revision (as by formal definition) it becomes clear that the proper construction of "substantially abutting" is to contact along a boundary, then examiner finds the claims as not enabled, as set forth below:

The specification describes essentially that the cross sections of the pieces are measured and that a change will indicate that there is a boundary/transition point. This is not enabling, however, because it does not take into account what the specific parameters of the computing methodology and measurement resolution are—information necessary to make and use the invention. Especially since food products are to be used which may have cross sectional variation *within* a piece (such as a chicken breast) making false boundary/transition point indication highly probable; and/or very uniform cross section (such as formed sausage product or pressed meat) making the boundary/transition point imperceptible. The specification does not provide any framework to establish the parameters of the control/measurement to make and use the device in accordance with the claimed "no gap" between items.

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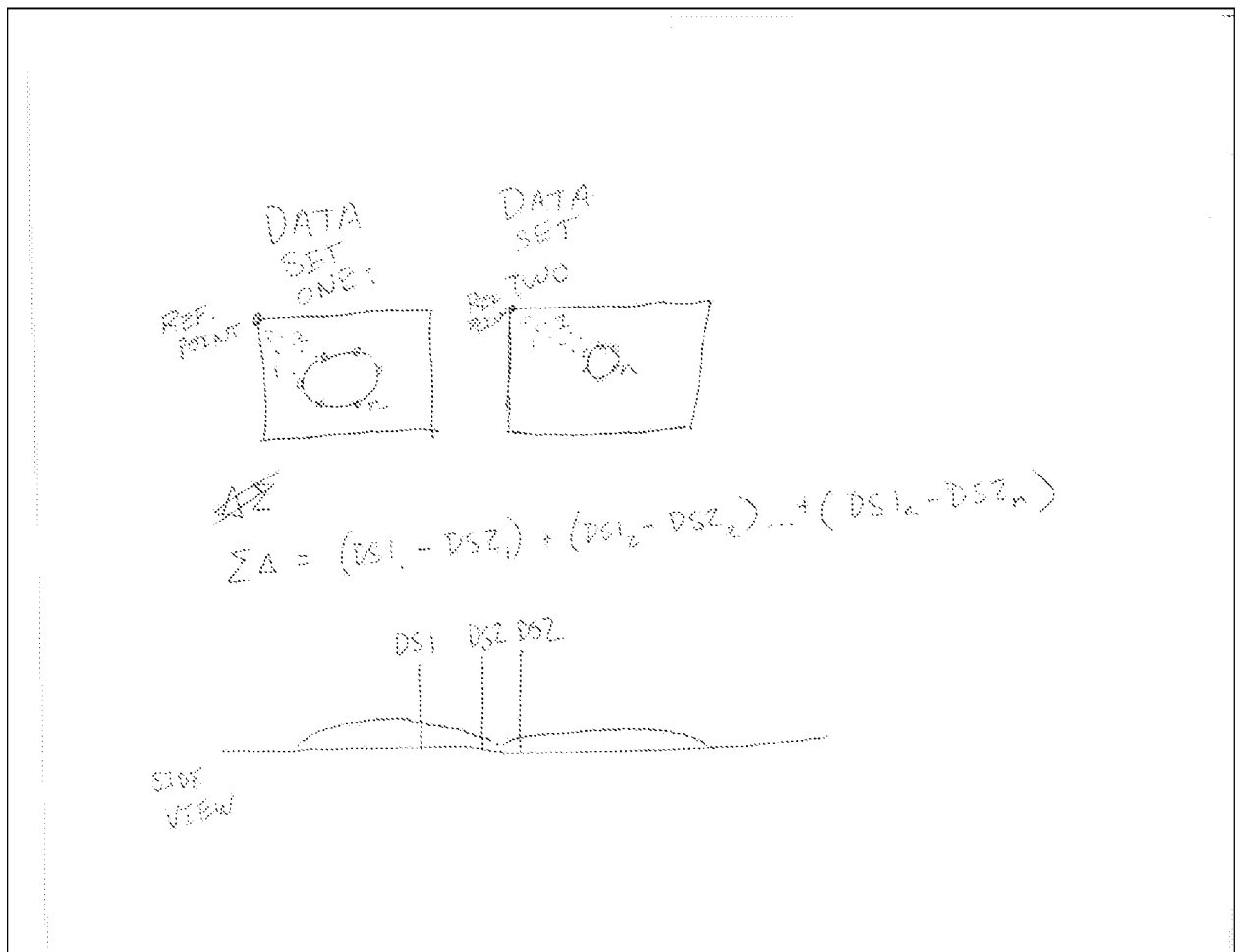
The specified "method" of "detecting a boundary" is to measure the size of the piece at a cross section (at radial points 1, 2, 3, 4, n... exactly as in Whitehouse) and then to compare those positions/ distances to adjacent distances (1', 2', 3' 4', n') and then measure the difference and sum the total. This way when the piece decreases in cross sectional area *all the points of measurement* decrease and the summation of the differences spikes up (since the differences are larger).

This is flawed, since any cross sectional change can trigger the same spike as it is alleged a boundary will do, and yet the application provides no way of being able to determine what are true boundaries and what are false positives. there is no way the direction of comparing the sum of the differences can lead to actual repeatable boundary detection without undue experimentation.

Examiner said as much in the interview of record, and directed applicant that evidence of the level of ordinary skill would be required to overcome this, and yet none was provided with the present submission.

Further:

Claim 35 sets forth that the boundary detection step involves comparison of "two successive data sets" without saying they are from item one and item two respectively, however the method does not include enough information to "analyze ...for identifying the boundary..." the sets of data (each "point" on the conveyor) would have to be arbitrary, since you don't know ahead of time whether the set represents item one or item 2. If there are two arbitrary sets of data as claimed, they would "look" like this:



From two “sets” of data, applicant claims that “Analysis” is possible to determine the “boundary” of the items- this is not true, since as seen in the above, having two sets of data will not give any information about the boundary, since the two marked “DS2” will be the same from an analysis viewpoint.

Alternatively a “set” of data could be all the cross sectional data from each *item*, but that would be circular in nature since the boundary would have to be known to determine what data was in which set before the comparison took place.

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

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The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 86-92 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

a. Claims 86-92 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Each of the claims requires a comparison of two “data sets” for “determining the boundary between the previously placed item and the subsequently placed item” (excerpted from claim 90—for example). The Data sets are supposedly from each item—which means that the boundary condition must be known to establish the “data sets” you cannot compare the data set from item one to the data set from item two in order to determine the end of item one and the beginning of item two. The claim structure is circular in nature, requiring data sets from the different items (identified as such) to determine where the boundary is between the items. This does not make sense.

b. Claim 89 requires a transition marker between the items, in contradiction to the requirement of claim 86 that the items have no gap therebetween. A marker “inserted between” as required by claim 89 will inherently make a gap.

Response to Arguments

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6. Applicant's arguments, see remarks filed 12/02/2009 with respect to the amendments requiring the contact of pieces and the comparison of data sets have been fully considered and are persuasive. The 102 and 103 rejections of 8/07/2009 have been withdrawn.

7. Applicant's arguments filed 12/02/2009 regarding the 112 first issues have been fully considered but they are not persuasive. Applicant alleges that paragraphs 0022-0025 and 0046-0049 "describes the method in sufficient detail in order to allow one of ordinary skill in the art to practice the invention". This is not supported by sufficient evidence in the record.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to SEAN M. MICHALSKI whose telephone number is (571)272-6752. The examiner can normally be reached on M-F 7:30AM - 3:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Boyer Ashley can be reached on 571-272-4502. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Sean M Michalski/
Examiner, Art Unit 3724

/Kenneth Peterson/
Primary Examiner, Art Unit 3724